REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

Claim 19 has been amended to depend from Claim 16.

Claims 4-8 have been allowed. Claims 12 and 13 would be allowable if rewritten in independent form. On the other hand, Claims 2, 3, 9-11 and 14-19 were rejected under 35 U.S.C. § 102 as being anticipated by the newly cited U.S. patent publication 2004/0175174 (Suhami). It is respectfully submitted that the claims define over this reference.

The present invention provides a light control element for use with a multimode optical waveguide and is capable or providing large reflectance even in the case of multimode operation. See page 46, lines 12-23 and page 54, lines 12-23. Thus, in order to perform multimode operation, the present invention uses an "optical coupling component," which is the element capable of performing a multimode operation. Because the optical coupling component is basically a connection element, its performance is not particularly wavelength dependent and so does not depend on the precision of manufacture of the waveguide.

Claims 2 and 3 recite an optical coupling component formed on a substrate. On the other hand, Figs. 11 and 12 of Suhami do not disclose an optical coupling component but instead disclose the use of a directional waveguide coupler which operates only with a single-mode waveguide. See paragraph [0207] of Suhami. The directional coupler is particularly sensitive to the precision of manufacture such as separation between the waveguides and shows strong wavelength dependence. Thus the subject matter of the rejected Claims 2, 3, 9-11 and 14-15 is not taught by directional waveguide coupler of Suhami.

Claim 16 recites a plurality of optical waveguides formed in the photonic crystal structure in the form of a line defect of the photonic crystal structure. On the other hand, Fig. 11 and 12 of Suhami disclose the use of point defect (resonant cavity) and a ring defect (micro-ring cavity). See paragraphs [0207] and [0209] of the reference.

When a point defect is introduced into a photonic crystal, there is caused a problem of leakage of light in the direction perpendicular to the plane on which the photonic crystal is formed. On the other hand, when a line defect is introduced with an infinite length, it becomes possible to cause propagation of light without the problem of leakage of light in the direction perpendicular to the plane of the photonic crystal. This means that a line defect provides a superior performance over the point defects or ring defects used in Suhami.

In addition, with the use of line defect, the present invention can reduce the optical transmission loss as compared to Suhami which uses a point defect or ring defect. Further, with the use of a line defect, it becomes possible to reduce the size of the defect area as compared with the case of using a ring defect. This means that it is possible to increase the interval of resonant wavelengths. Thus Claims 16, 17 and 19 also define over Suhami.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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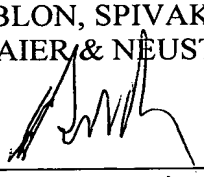

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